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2811
#33 Amended
PATENT
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Thomas L. Ritzdorf *et al.*

APPLICATION No.: 09/018,783

FILED: February 4, 1998

FOR: **METHOD FOR FILLING RECESSED
MICRO-STRUCTURES WITH
METALLIZATION IN THE PRODUCTION
OF A MICROELECTRONIC DEVICE**

EXAMINER: Thomas J. Magee

ART UNIT: 2811

CONF. No: 1242

TECHNOLOGY CENTER 2800

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Amendment in Response to Restriction Requirement

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

The present communication responds to the Office Action dated 21 November 2002 in the above-identified application. Please amend the application to read as follows. The attached Appendix presents a marked-up version of the changes made to the claims by the current amendment.

In the Claims

1. A method for filling recessed microstructures at a surface of a semiconductor workpiece with copper metal comprising:

depositing copper into recessed micro-structures using an electrochemical process generating copper grains that are sufficiently small so as to substantially fill the recessed microstructures; and

subjecting the surface of the semiconductor workpiece with the deposited copper to an elevated temperature annealing process at a temperature below about 100 degrees Celsius for a time period that is sufficient to increase the grain size of the deposited copper.